What is claimed is:

1. An activation method of a communications apparatus that have both a feedback loop and a non-linear distortion compensation device with a function to generate/update a distortion compensation coefficient, comprising:

   (a) opening the feedback loop;

   (b) adjusting both a level and a phase of an analog signal of the communications apparatus;

   (c) closing the feedback loop; and

   (d) generating/updating the distortion compensation coefficient.

2. The activation method according to claim 1, further comprising:

   (e) activating a digital section of said communications apparatus prior to step (a); and

   (f) activating an analog section of said communications apparatus between steps (a) and (b).

3. The activation method according to claim 1, wherein said level adjustment is made to offset gain of an amplifier for amplifying a signal in order to

transmit radio waves of said communications apparatus.

4. The activation method according to claim 1, wherein said phase adjustment is made to adjust analog signal delay that is caused in the analog section of said communications apparatus and to match in timing a signal transmitted via a feedback loop with a signal directly inputted to said non-linear distortion compensation device.

5. The activation method according to claim 1, wherein said communications apparatus conducts multi-carrier transmission, said activation method, further comprising

(g) adjusting both amplitude and phase of a signal for each carrier.

6. The activation method according to claim 5, wherein step (b) is performed using a central frequency of a band occupied by the plurality of carriers as a whole.

7. The activation method according to claim 1, wherein said generation/update of a distortion compensation

coefficient is made using a test signal.

8. The activation method according to claim 1, wherein said communications apparatus is composed of a plurality of transmitting systems, forms a feedback loop by sequentially switching the plurality of transmitting systems and generates/updates the distortion compensation coefficient.

9. The activation method according to claim 1, wherein a plurality of generation/update steps of the distortion compensation coefficient can be set.

10. The activation method according to claim 9, wherein the generation/update step of the distortion compensation coefficient is set to a minimum and a level of a signal to be used to generate/update the distortion compensation coefficient is changed in multi-steps from the minimum value and the distortion compensation coefficient is generated/updated by gradually increasing the level.

11. The activation method according to claim 1, wherein a value measured in advance is used as an

initial value for said generation/update of a distortion compensation coefficient.

12. The activation method according to claim 1, wherein all coefficients are set to 1+j0 (j is the imaginary unit) as an initial value for said generation/update of a distortion compensation coefficient.

13. The activation method according to claim 1, wherein convergence of a generation/update process of the distortion compensation coefficient is judged by detecting size of a difference signal between a signal directly inputted to said non-linear distortion compensation device and a signal which is transmitted via said feedback loop and the level of which is adjusted.

14. The activation method according to claim 1, wherein convergence of a generation/update process of the distortion compensation coefficient is judged by detecting an out-of-band radiation level of a signal immediately before being transmitted from said transmitting unit.

15. The activation method according to claim 1, wherein if said non-linear distortion compensation device is switched off and is switched on again, a value immediately before said non-linear

5 distortion compensation device is switched off is used as an initial value for said level adjustment and phase adjustment processes in step (b).

16. The activation method according to claim 1,

10 wherein a transmitting side of said communications apparatus comprises an antenna and a signal termination unit with the same impedance as that of the antenna, and generates/updates the distortion compensation coefficient while terminating a signal

15 used to generate/update the distortion compensation coefficient at the signal termination unit.